

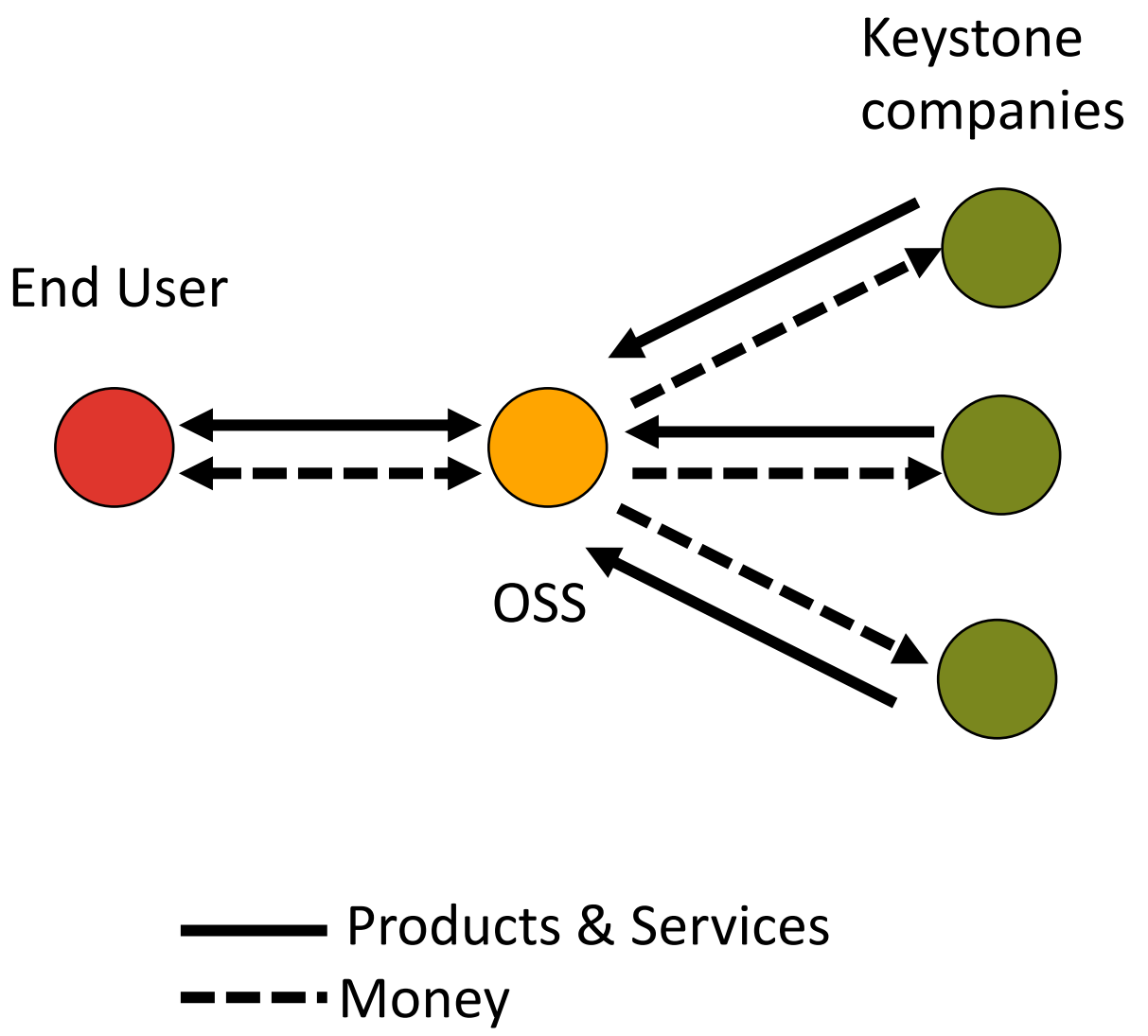
# Innovative business model to foster renewable heating and renovation

Juliana Zapata<sup>1</sup>, Silvia Ulli-Beer<sup>2</sup>

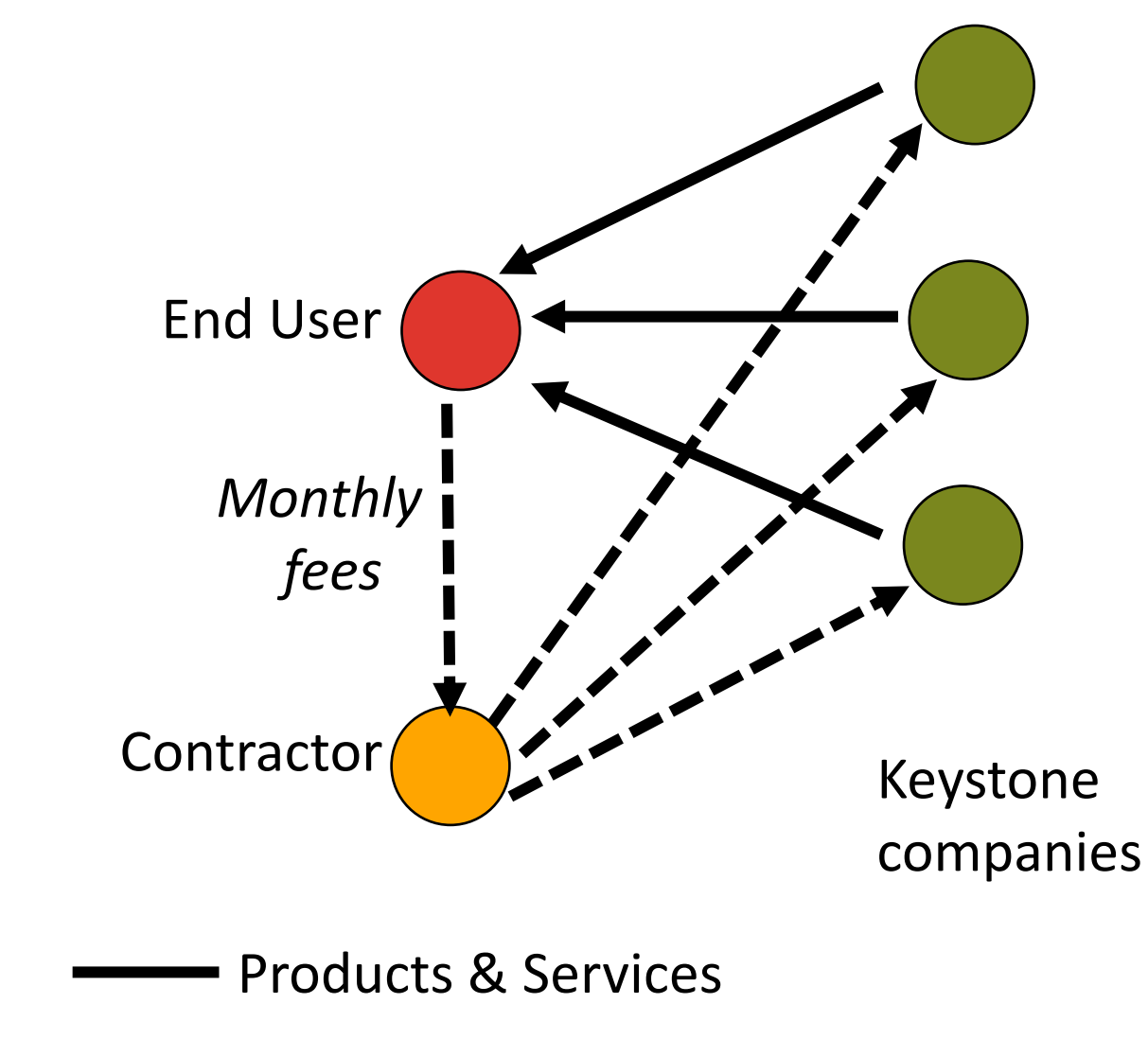
1) juliana.zapata@zhaw.ch 2) silvia.ulli-beer@zhaw.ch

Using the business ecosystem lens, we assessed three different business models aiming at accelerating building renovation processes. Our goal is to foster business model innovation by gaining a comprehensive understanding of the complexities within the renovation ecosystem. The approach involves identifying key actors, understanding their interests and challenges, and finding ways to align their efforts towards a common goal.

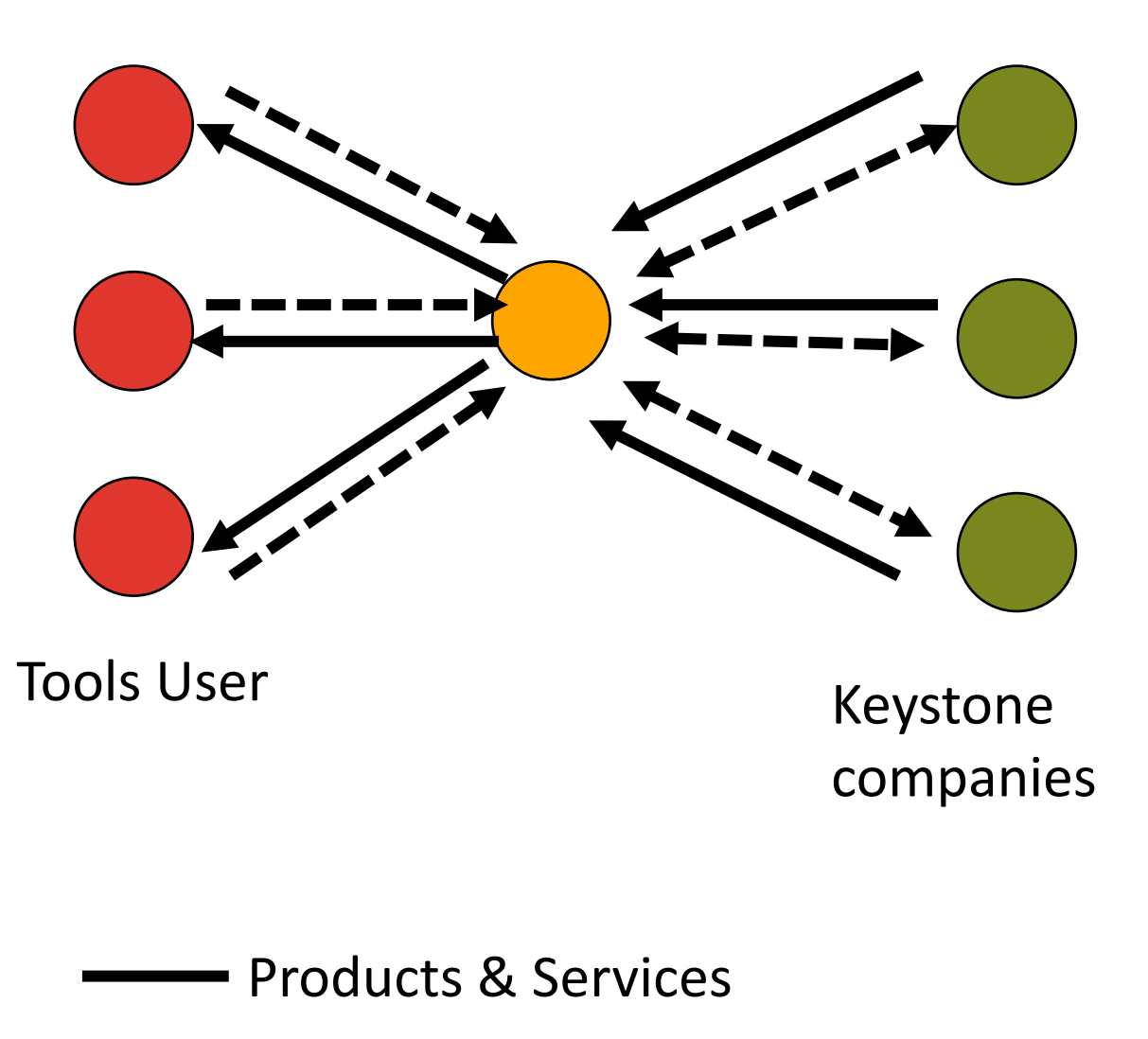
**One-Stop-Shop (OSS)** is a central hub that provides a comprehensive range of services related to buildings retrofitting. It serves as intermediary between homeowners and renovation suppliers such as installers, financier etc. (Bertoldi,2019).

Value Network Analysis	End Users	Common Goal	Keystone companies
	<b>Who:</b> Owners of single and multifamily buildings.	Accelerate building decarbonization.	<b>Who:</b> Architects, Building professionals.
	<b>Value proposition:</b> High quality, uncomplicated renovation process.	<b>Orchestrator- OSS</b>	<b>Value proposition:</b> Improve cooperation network and reduce administrative hassle.
	<b>Challenges:</b> Perceived high cost of an all-inclusive offer.	<b>Challenges:</b> <ul style="list-style-type: none"><li>Large transaction cost</li><li>Public organizations must ensure neutrality</li></ul>	<b>Challenges:</b> <ul style="list-style-type: none"><li>Cooperation and competition might be challenging inside OSS</li><li>Lack of qualified technicians</li></ul>
	<b>Resources</b> *Renovation Know-how * Strong local network * Financial resources		

**Contracting:** Energy service contracting consists in the outsourcing of energy-related services to a specialized contractor known as an Energy Service Company (Klinke, 2018). The aim is to reduce energy consumption and cost.

Value Network Analysis	End Users	Common Goal	Keystone companies
	<b>Who:</b> Owners of single, multifamily, and commercial buildings with low energy efficiency.	Accelerate building decarbonization.	<b>Who:</b> Building professionals Financial institutes.
	<b>Value proposition:</b> Upfront financing of the renovation work.	<b>Contractor</b>	<b>Value proposition:</b> Timely payment of the renovation work.
	<b>Challenges:</b> <ul style="list-style-type: none"><li>Long term contract</li><li>Distrust towards contracting options</li></ul>	<b>Challenges:</b> <ul style="list-style-type: none"><li>Large perceived financial risk</li><li>Large transaction cost</li><li>Unsupportive regulations</li></ul>	<b>Challenges:</b> <ul style="list-style-type: none"><li>Lack of qualified technicians</li></ul>
	<b>Resources</b> *Large Financial * Renovation Know-how		

**Renovation platform** integrates different planning and design tools to facilitate the use, ensure interoperability and facilitate collaboration and knowledge exchange among stakeholders.

Value Network Analysis	Tools Users	Common Goal	Tools Developers
	<b>Who:</b> Utilities, municipalities, large real state companies, engineering offices, building professionals.	Facilitate renovation at district	<b>Who:</b> Planning and design tools developers.
	<b>Value proposition:</b> Facilitates collaboration, communication as well as transparent and holistic planning, saving planning costs.	<b>Platform operator</b>	<b>Value proposition:</b> Increased collaboration and knowledge sharing throughout the project development.
	<b>Challenges:</b> <ul style="list-style-type: none"><li>Might be too complex for non-technical users</li></ul>	<b>Challenges:</b> <ul style="list-style-type: none"><li>Large efforts to find adequate platform partners</li><li>Platform profitability</li></ul>	<b>Challenges:</b> <ul style="list-style-type: none"><li>Knowledge leakage</li><li>Complexity reduction and audience specific interfaces</li><li>Competition with other planning tools and between platform partners</li></ul>
	<b>Resources</b> *Renovation Know-how * Strong network * Renovation related data		

Next steps involve completing our empirical studies by conducting interviews with key stakeholders. Working closely with our praxis partners, we will refine the business models based on the gathered insights and disseminate the acquired knowledge in workshops and papers.

References

Bertoldi, P., Economidou, M., Palermo, V., Boza-Kiss, B., Todeschi, V., 2021. How to finance energy renovation of residential buildings: Review of current and emerging financing instruments in the EU. WIREs Energy and Environment 10, e384. <https://doi.org/10.1002/wene.384>  
Klinke, S., 2018. The determinants for adoption of energy supply contracting: Empirical evidence from the Swiss market. Energy Policy 118, 221–231. <https://doi.org/10.1016/j.enpol.2018.03.055>